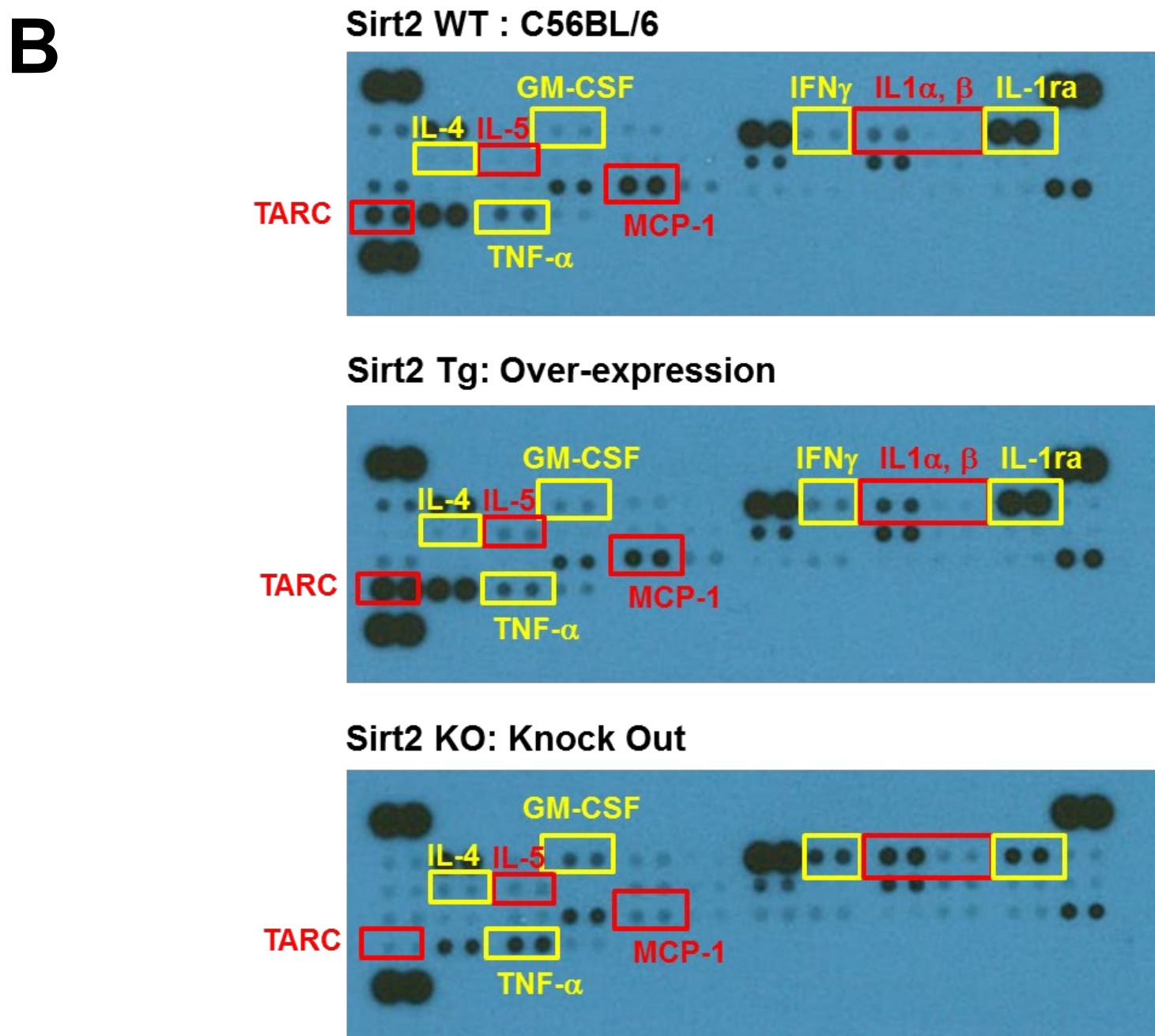
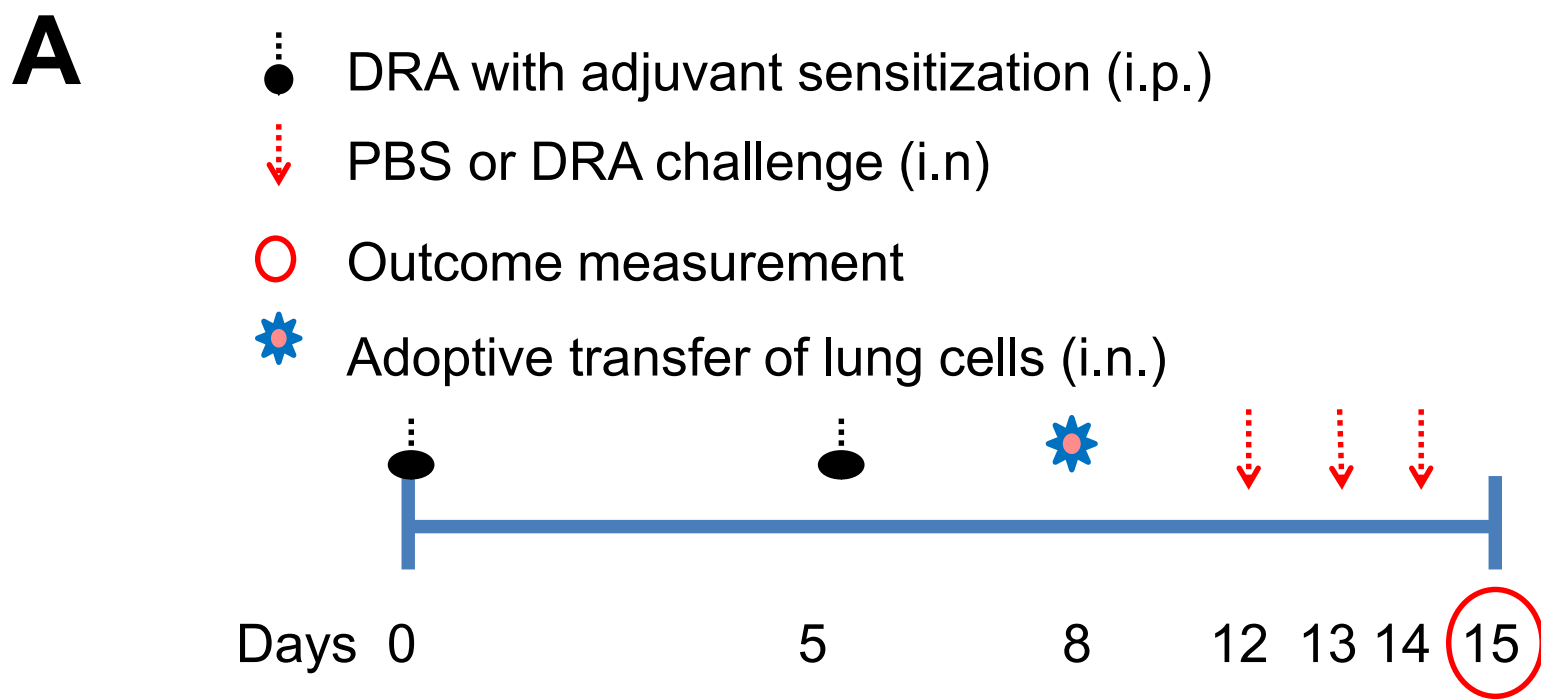


Supplemental Figure 1



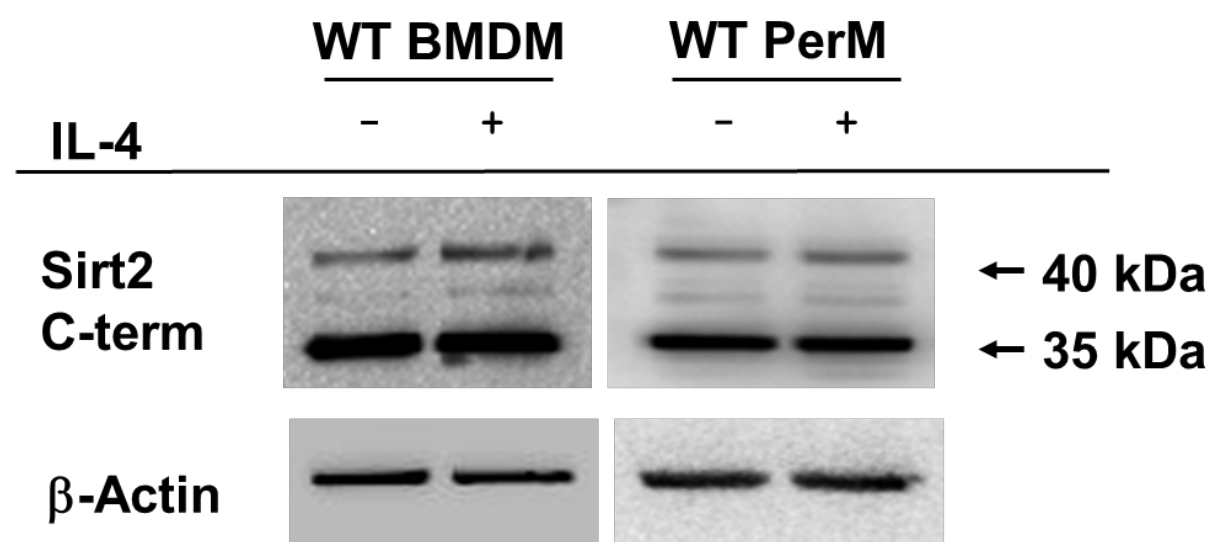
CXCL13	C5/C5a	G-CSF	GM-CSF	CCL1	Eotaxin	siCAM1	IFN-r	IL-1a	IL-1b	IL-1ra	IL-2
IL-3	IL-4	IL-5	IL-6	IL-7	IL-10	IL-13	IL-12p70	IL-16	IL17	IL-23	IL-27
IP-10	CXCL11	KC	M-CSF	MCP-1	CCL12	CXCL9	CCL3	CCL4	CXCL2	RANTES	CXCL12
TARC	TIMP-1	TNF-a	TREM-1								

Supplemental Figure 1: Establishment of allergic inflammatory DRA-murine model

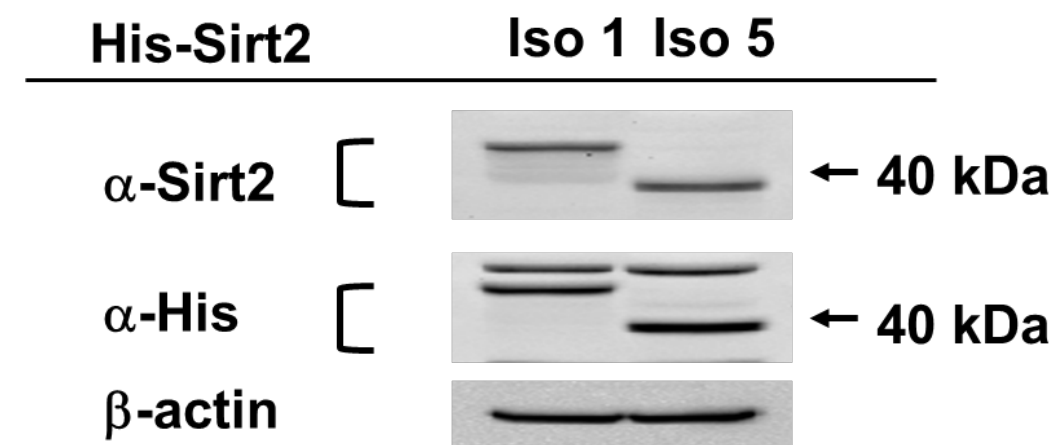
(A) A time-line for the murine model outlines the sensitization challenge and adoptive transfer models utilized to establish an experimental allergic inflammation model. (B) BALF was isolated from Sirt2 WT, Sirt2 Tg, and Sirt2 KO mice at day 15 following establishment of allergic inflammation after DRA sensitization and challenge. Expression of a variety of chemokines and cytokines were measured using a mouse cytokine array kit (R&D systems). BALs from 4 mice from each group were pooled to run the cytokine array.

Supplemental Figure 2

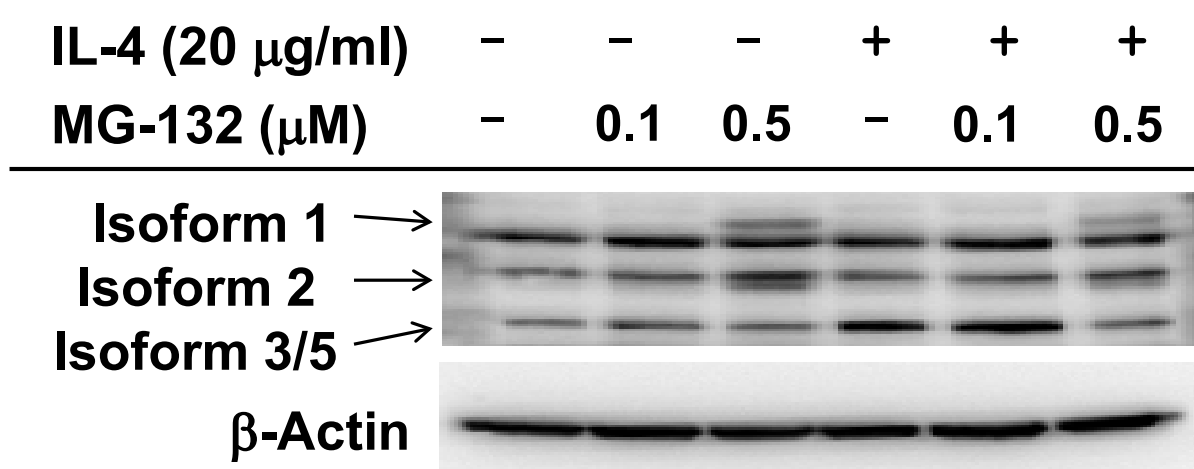
A



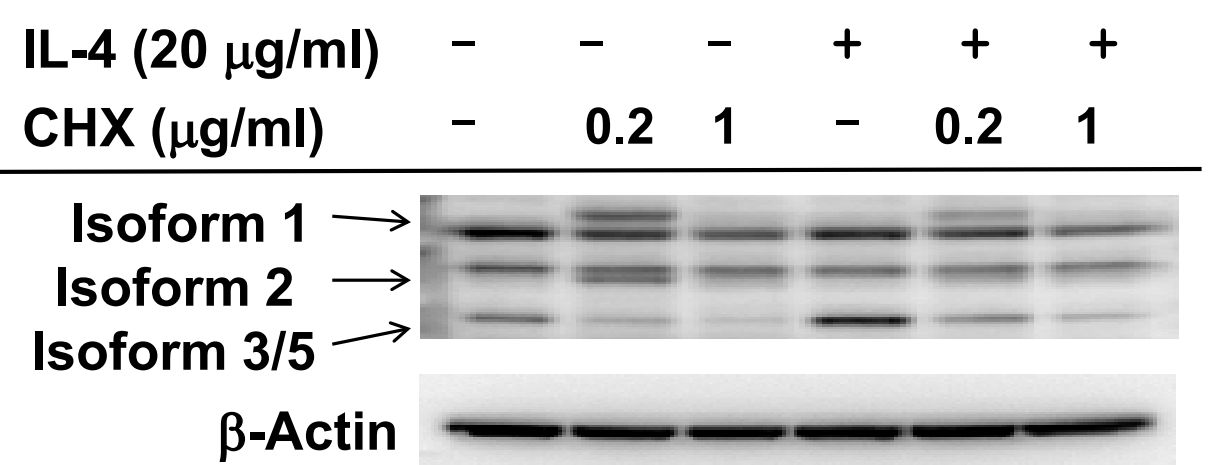
B



C



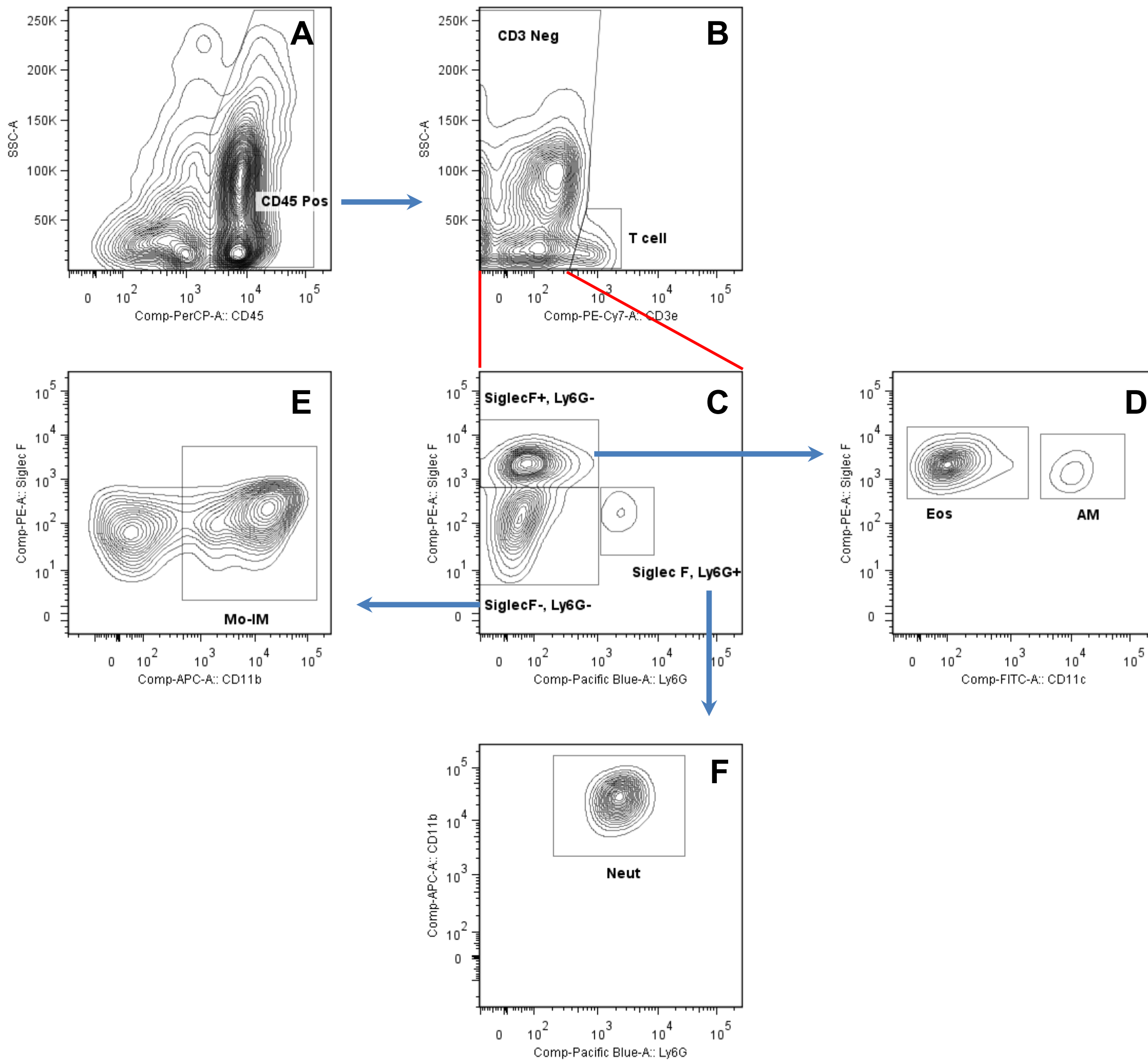
D



Supplemental Figure 2: Identification of Sirt2 isoform 5 in lung macrophages

(A) BMDM and peritoneal macrophages (PerM) were incubated with rmlL-4 and expression of Sirt2 isoforms were detected by Western blot at 48 hr. (B) HEK 293 cells were transfected with pcDNA3.1/V5-His-Sirt2-Isoform1 or Isoform5 by Lipofectamine 3000 for 3hr and harvested at 24 hr. Expression of Sirt2 isoform1 and 5 was confirmed with anti-His and Sirt2 antibodies by immunoblotting. Mouse lung macrophages were isolated by collagenase digestion and incubated with rmlL-4 (20 ng/ml) for 24 hr. After 1 day in culture, MG-132 (C) or Cycloheximide (D) were added to the wells and lysates were collected after an additional 24 hr of culture. Expression of Sirt2 isoform 1, 2 and 3/5 were confirms by Western blot analysis.

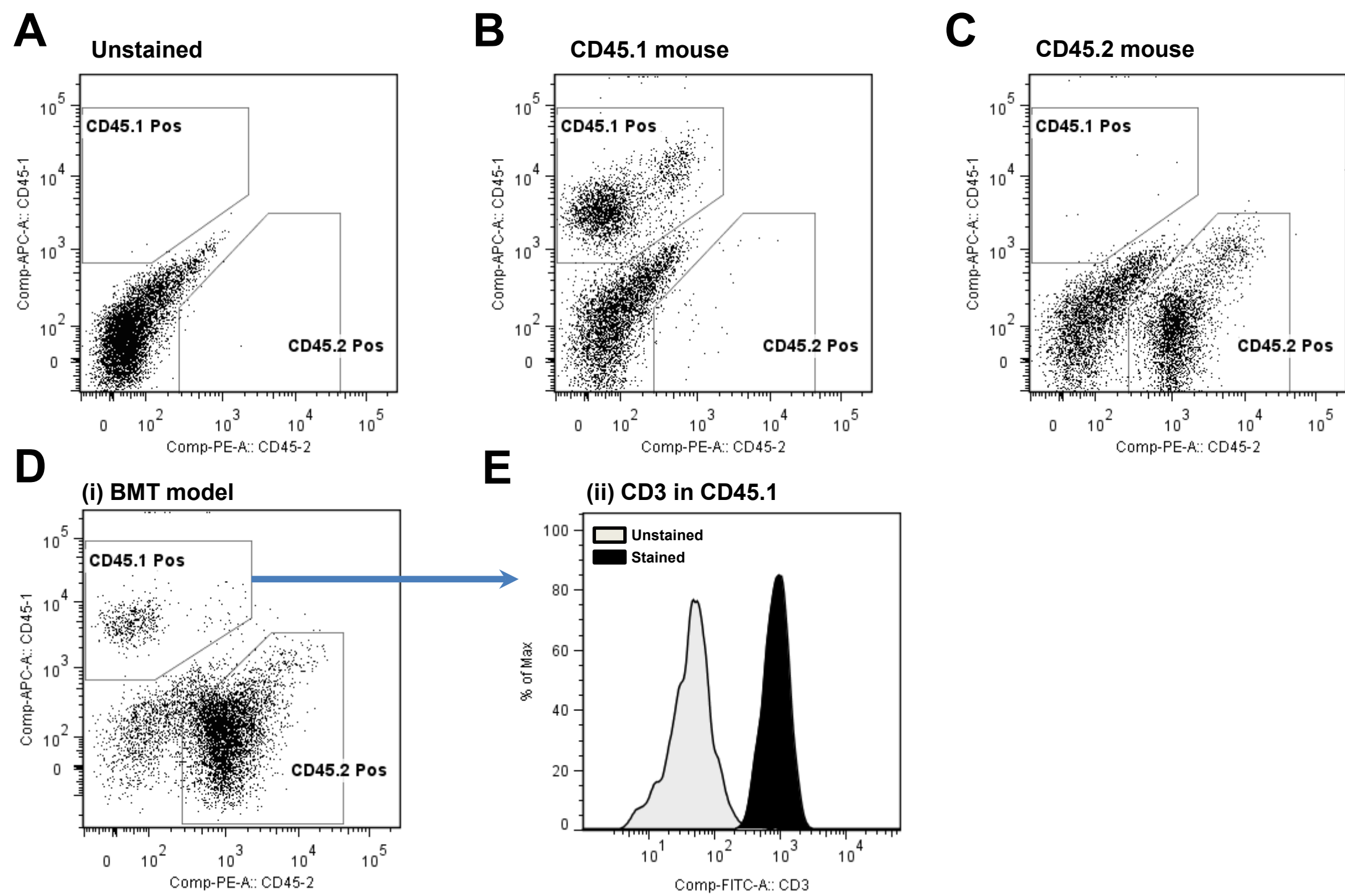
Supplemental Figure 3



Supplemental Figure 3: Flow cytometric gating scheme for identification of leukocyte populations within the mouse lung following DRA-challenge.

Total lung cells were isolated by collagenase/DNase digestion then fixed with 2% PFA for flow cytometric analysis. (A) Briefly, cells were gated on CD45 positivity to further analyze leukocyte population in the lung. (B) CD3⁺ T cells were gated out and (C) expression of Siglec F and Ly6G were measured on CD45⁺CD3⁻ cells. (D) Cells that were SiglecF⁺Ly6G⁻ were further delineated into eosinophils (SiglecF⁺CD11c⁻) and alveolar macrophages (SiglecF⁺CD11c⁺). (E) Cells that were SiglecF⁻Ly6G⁻ were determined to be monocytes or interstitial macrophages (SiglecF⁻CD11b⁺). (F) Cells that were SiglecF⁻Ly6G⁺ were further delineated into neutrophils (Ly6G⁺CD11b⁺) cells.

Supplemental Figure 4



Supplemental Figure 4: Reconstitution of BM chimera mice following conditioning regimens.

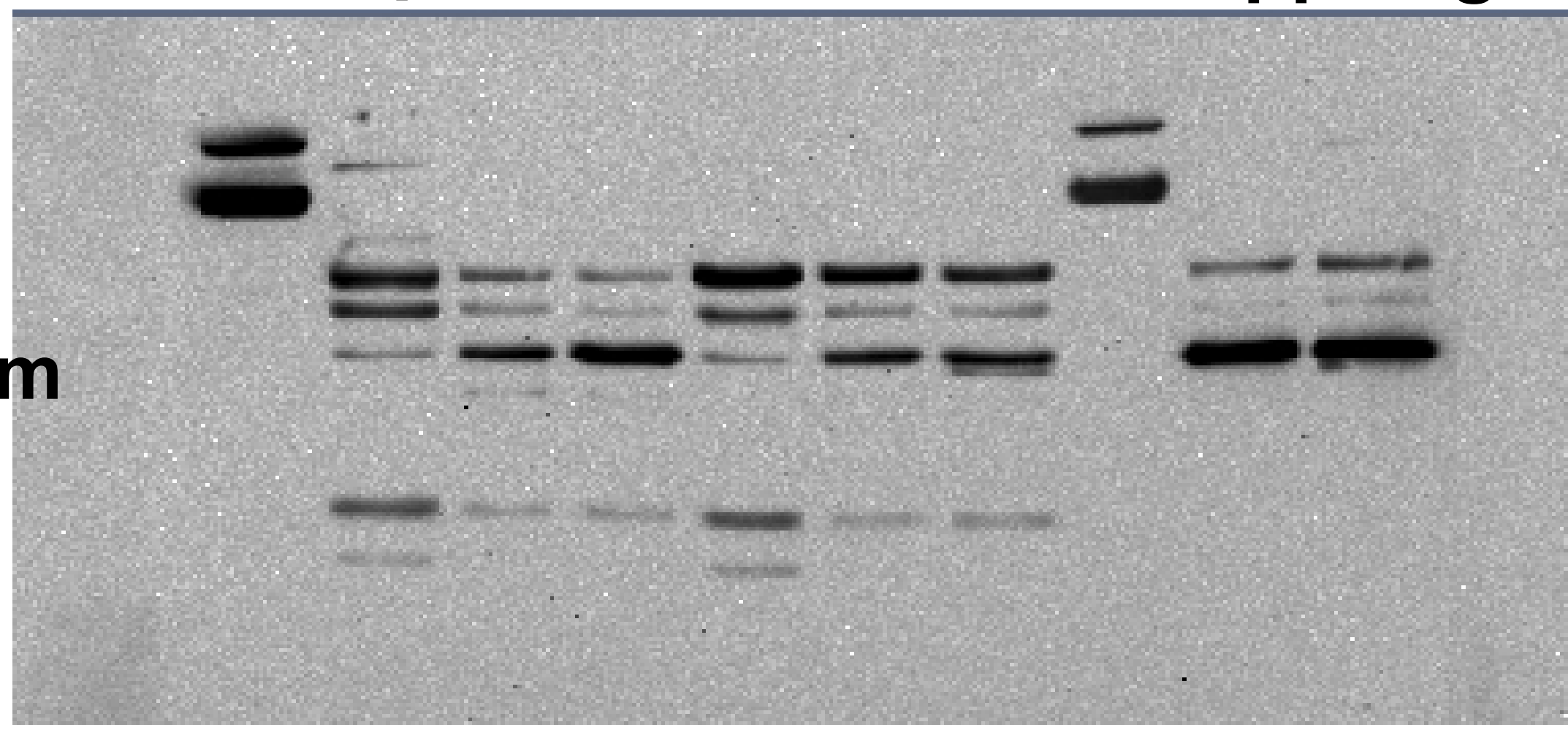
The reconstitution of donor derived cells was assessed 5 weeks after lethal total body irradiation. CD45.1 and CD45.2 congenic markers were assessed by flow cytometry to confirm lung reconstitutions. CD45.1 and CD45.2 expression (A) from unstained cells and cells from (B) CD45.1 recipient control, (C) CD45.2 donor control, (D) BMT mouse. (E) Interestingly, the residential recipient CD45.1 cells (<5%) were positive for CD3.

**WT
LMΦ**

**Tg
LMΦ**

**BMDM for
Suppl Figs**

**Sirt2
C-term**



Full Gels for Figure 1E

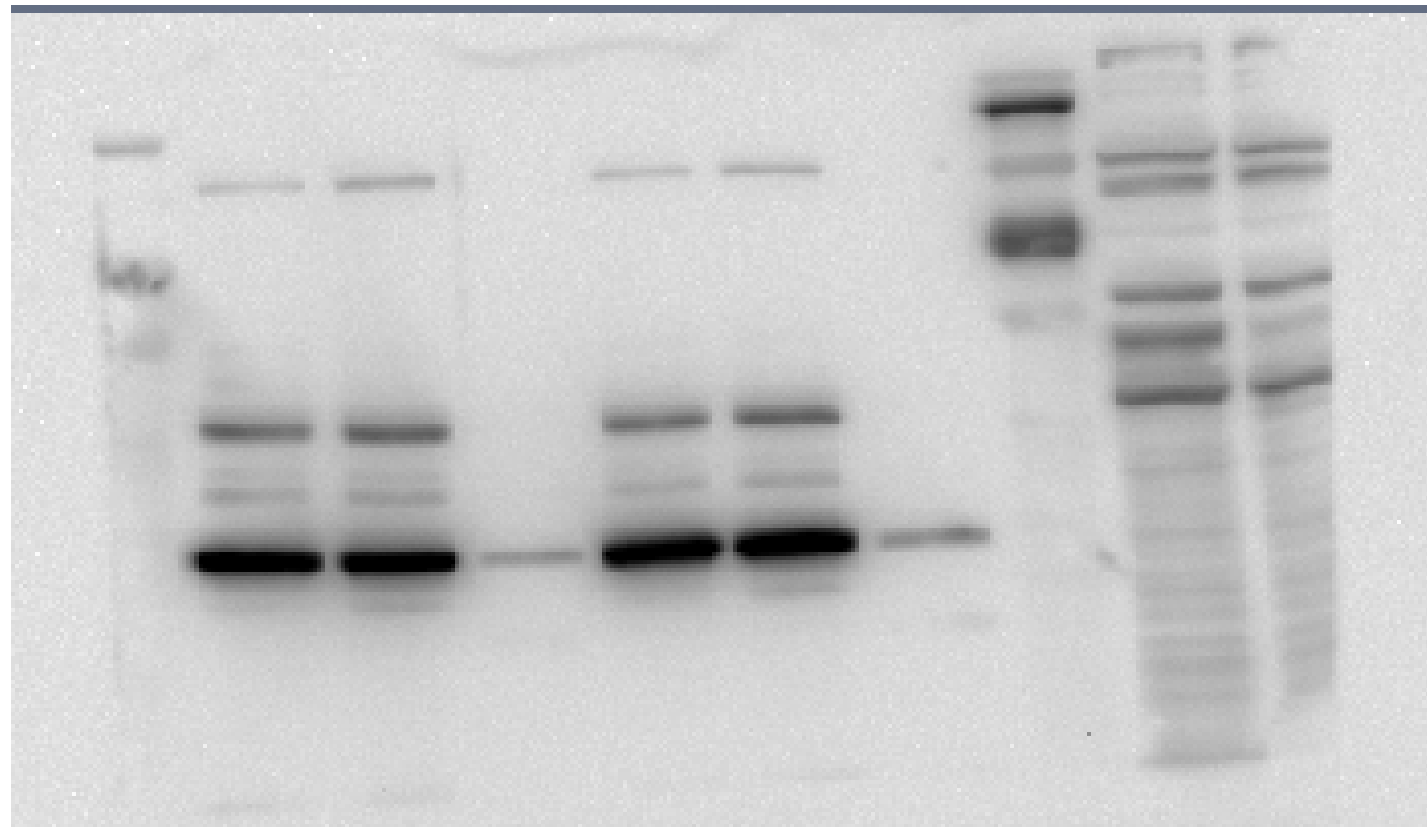
Full Gels for Sup
Figure 1B left panel

β-Actin



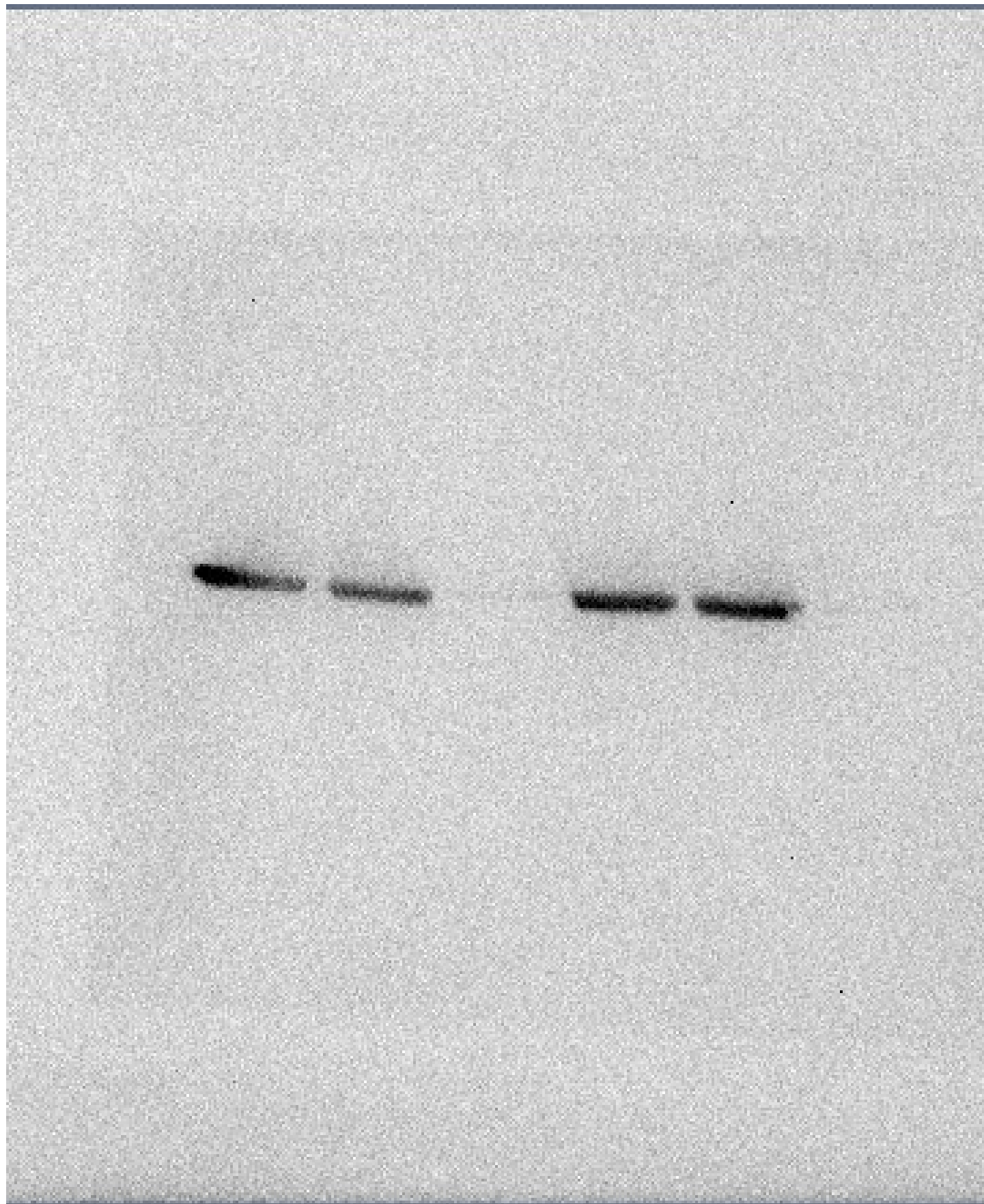
PerM IL-4 48hr

**Sirt2
C-term**



Full Gels for Sup
Figure 1B right panel

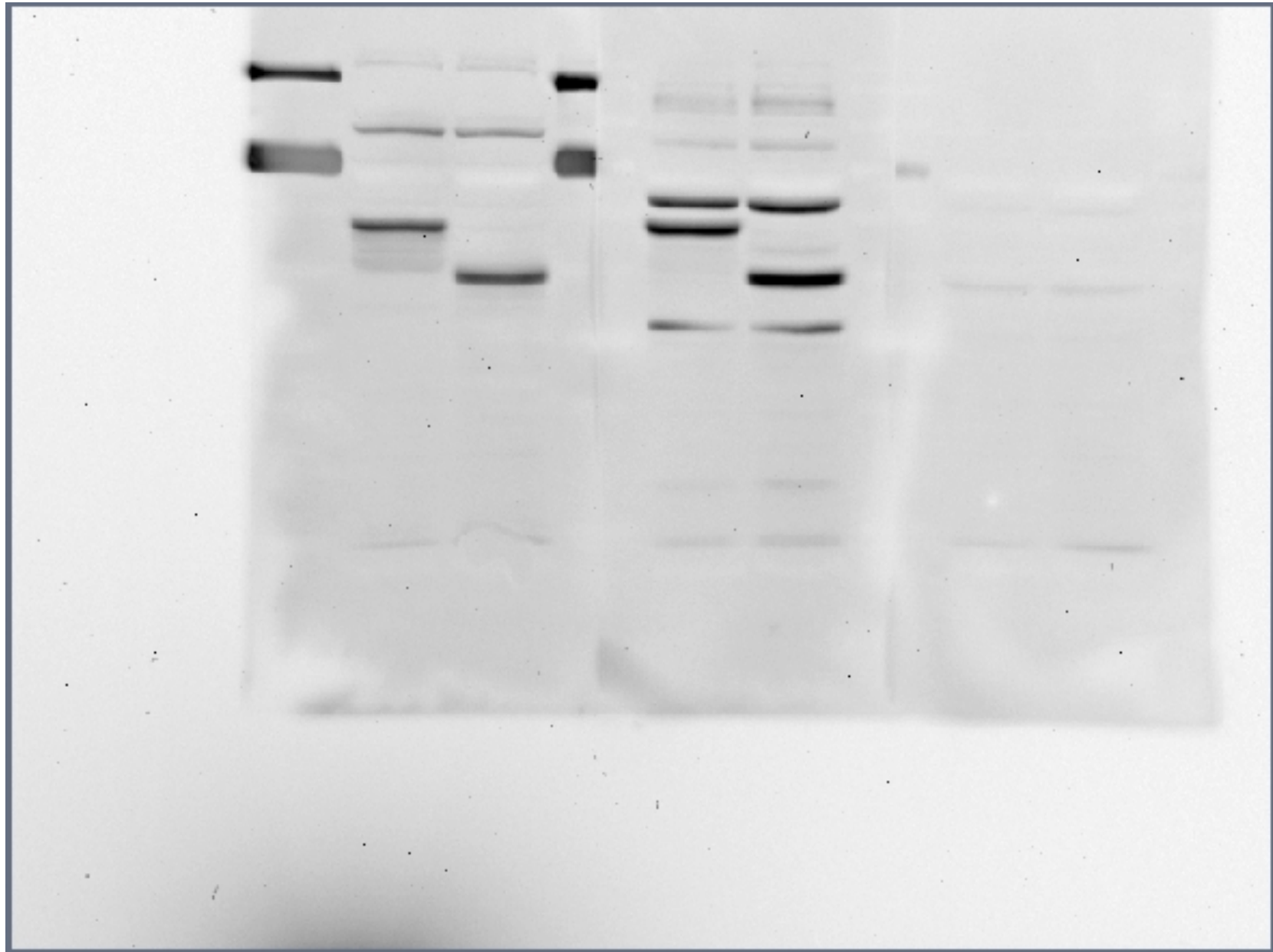
β -actin



His

Sirt2

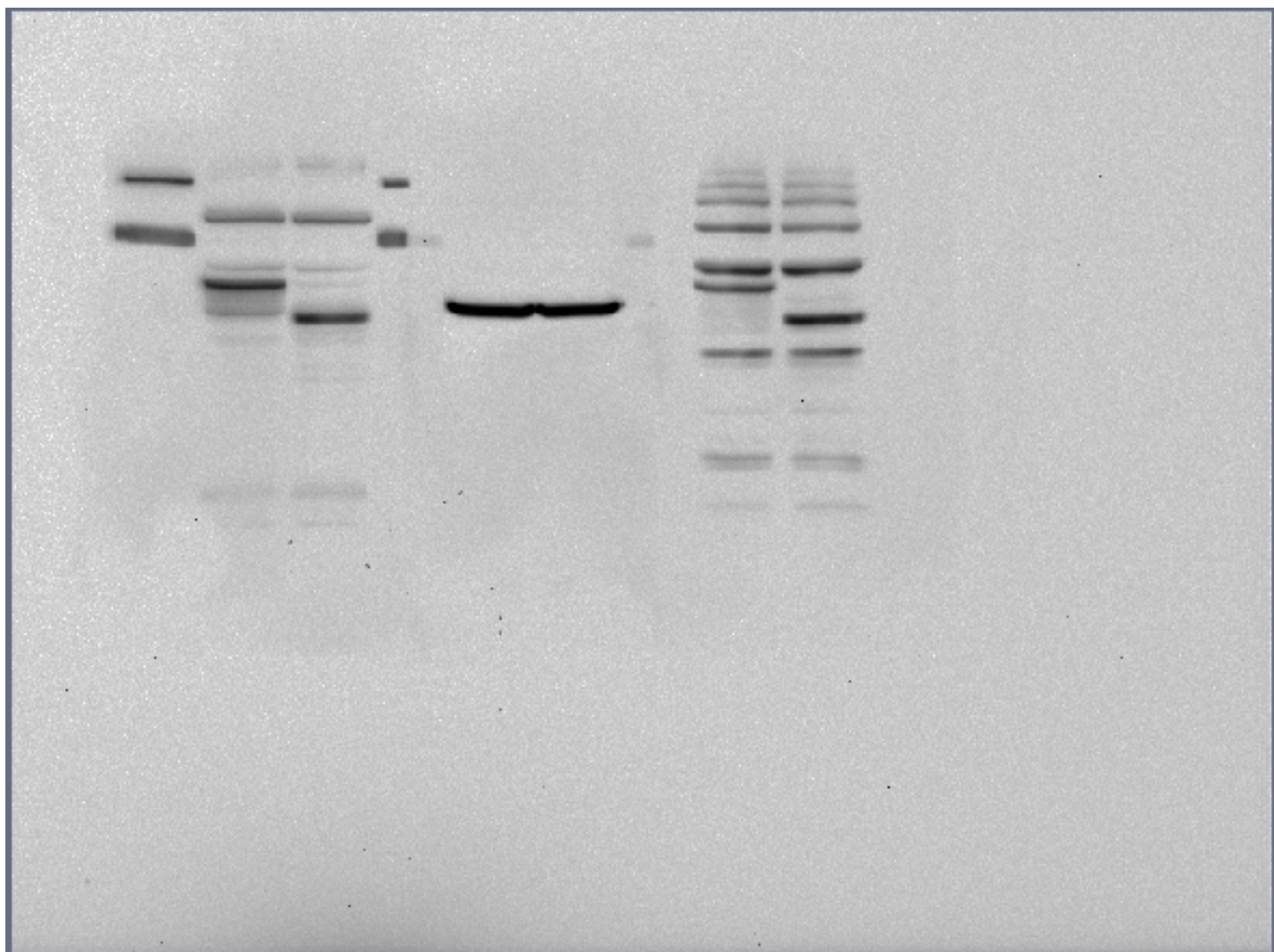
β -actin



Full Gels for Sup
Figure 1C right panel

His β -actin

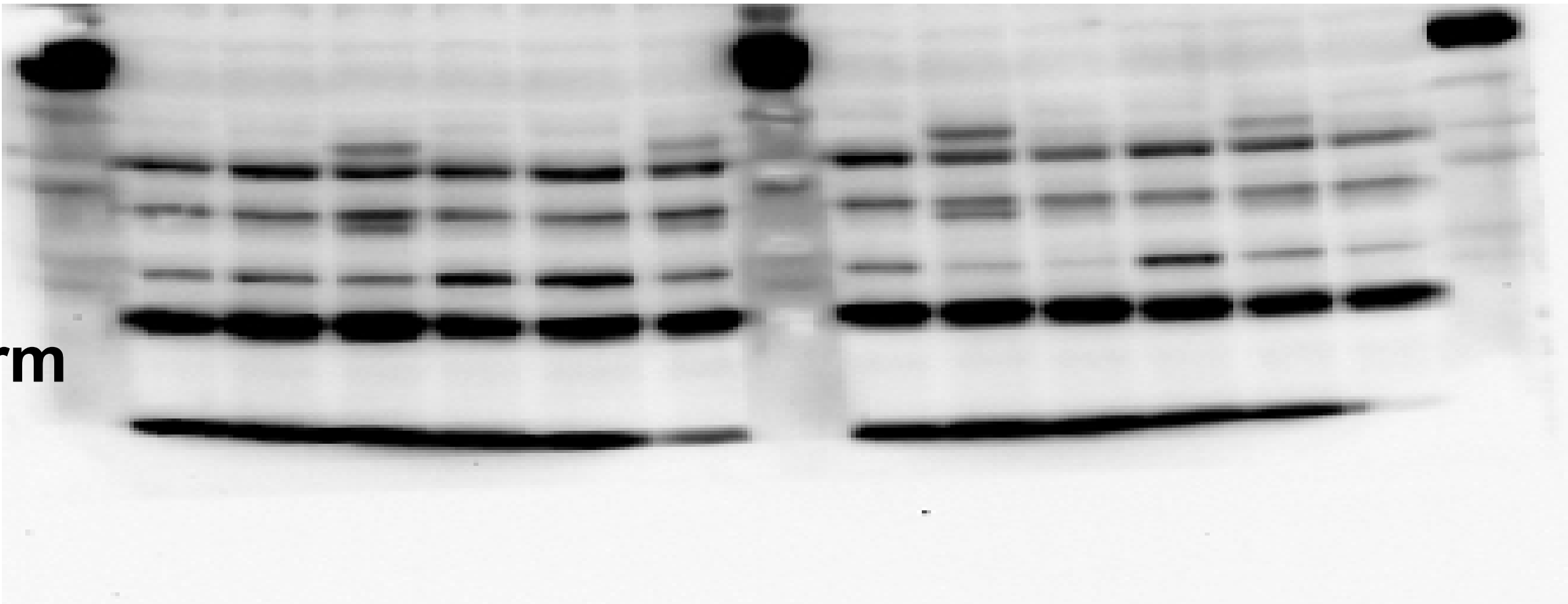
Sirt2



MG-132 (μM)

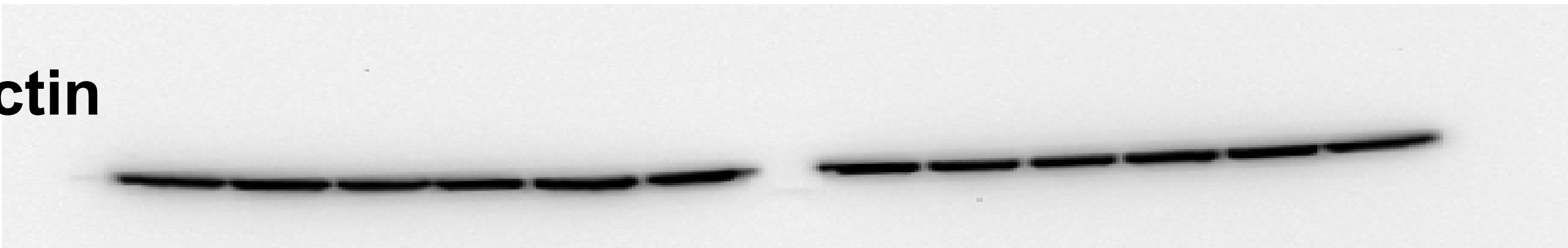
CHX ($\mu\text{g/ml}$)

**Sirt2
C-term**

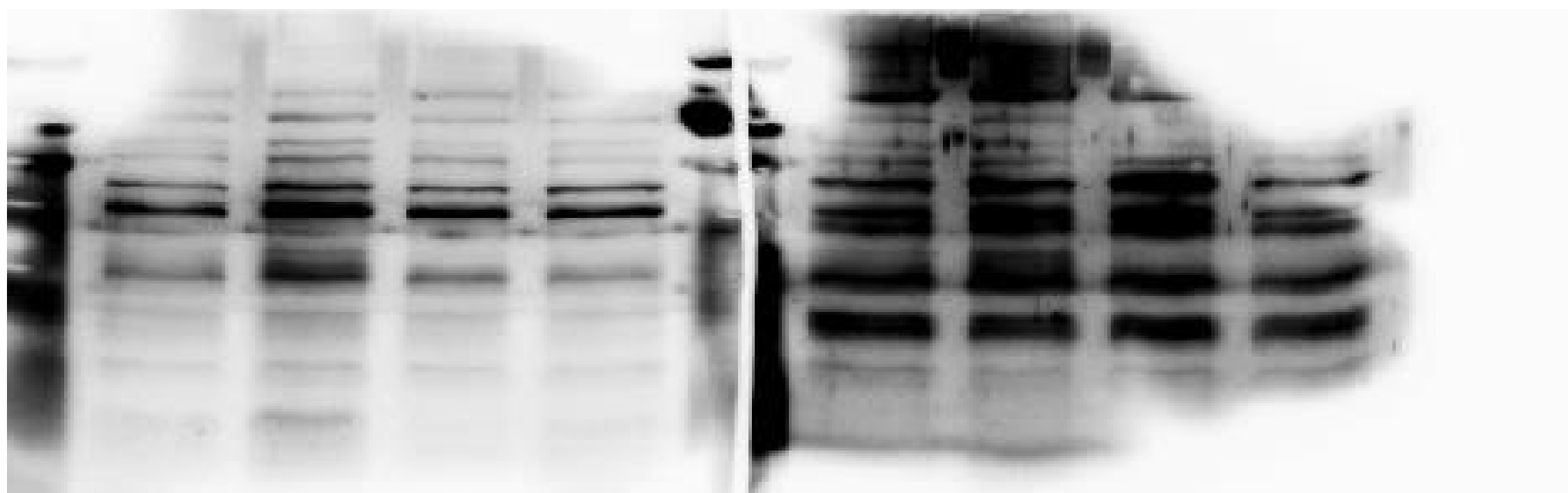


Full Gels for Sup Figure 1D and E

β -Actin



Sirt2
C-term



Full Gels for Figure 5A

β -actin

